



Fig. 1 Swollen knees of the patient

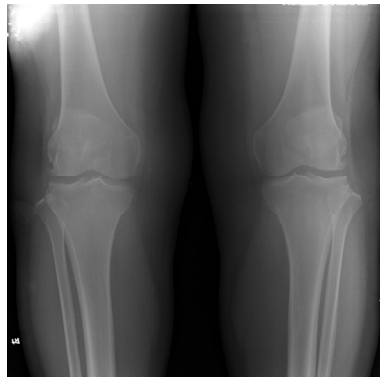


Fig. 2 Retrograde change of knee joint

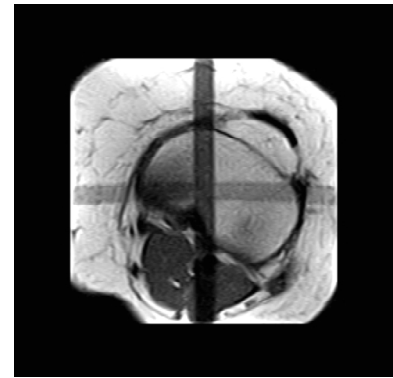


Fig. 3 Quite a lot of adipose tissue accumulates in the subcutaneum around the left knee joint

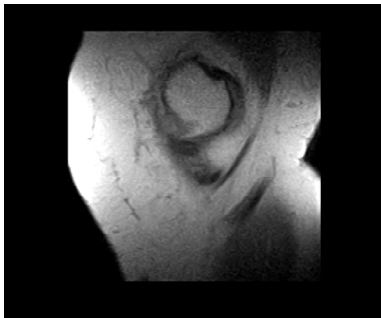


Fig. 4 Quite a lot of adipose tissue accumulates in the subcutaneum around the left knee joint.



Fig. 5 Quite a lot of adipose tissue accumulates in the subcutaneous tissue

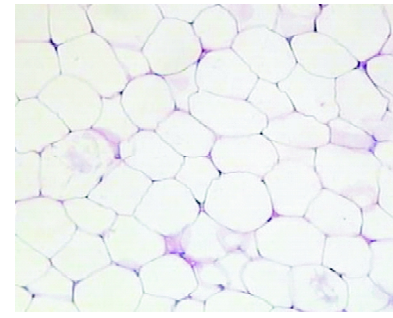


Fig. 6 The observation of the ripe adipose tissue(HE, × 40)

According to the patient's medical history, clinical manifestation, MRI and histopathology, this disease was diagnosed as benign symmetric lipomatosis, a very rare case with involvement of the knees. This disease did not impact the patient's everyday life, and therefore no treatment was performed.

DISCUSSION

Benign symmetric lipomatosis(BSL) is also known as Madelung's disease, Launois-Bensaude syndrome, and multiple symmetrical lipomatosis(MSL). The disorder was first described by Brodie in 1846. Madelung in 1888 and Launois and Bensaude in 1898 characterized the disease^[1]. BSL is different from simple obesity, which is characterized by the presence of well-distributed total body fat.

BSL is common in Caucasian Mediterranean males but very rare in Chinese people. It is usually described in adults from 30 to 60 years old, with an incidence of about 1 in 25,000 and a male-to-female ratio of 15:1 to 30:1^[1]. The pathogenesis of BSL has still been unclear up to now. Most cases have no hereditary pattern. An abnormal lipogenesis induced by catecholamines was observed^[1]. Nisoli *et al.*^[2] indicated that BSL might be the consequence of defective noradrenergic modulation

of proliferation and differentiation of brown fat cells. Another author suggested that the mechanism for accumulation of adipose tissue was defective in the lipolytic pathway of the fat affective cells^[3]. The majority of the patients with BSL have a history of alcohol abuse and hepatopathy. In the cases examined by Kölbl and Veltman^[4], in 112 patients, 70% were heavy drinkers, and the significant liver damage was present in over 45%. There were two rare cases of BSL in women who both were alcoholics with hepatic sequelae. The disease is often associated with diabetes mellitus, reduced glucose tolerance, hyperinsulinemia, hyperuricaemia, hypertension, polyneuropathy, malignant tumors of the upper airways, endocrine tumors, hypothyroidism, hypertriglyceridemia, hyperlipoproteinemia, macrocytic anemia and renal tubular acidosis^[5-7]. The case reported by in this article is the patient with BSL in association of hypertension, hypercholesteremia and hyperlipoproteinemia, but without alcoholism and hepatopathy.

BSL is usually characterized by the presence of multiple, symmetric, nonencapsulated fat masses in the face, neck and occasionally other areas. The patients often have a striking appearance of "cattle neck" or "hump back", which can cause neck deformity and

